

DERWENT-ACC-NO: 1993-388027

DERWENT-WEEK: 200216

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TITLE: Dimensionally-stable laminate for  
bituminised roofing strip prodn - has reinforcing layer  
of glass fibre mesh between layers of spun-bonded PET  
fibre, fixed by needling

INVENTOR: KAULICH, F; SCHOEPS, M ; WEITER, B C

PATENT-ASSIGNEE: HOECHST AG[FARH] , JOHNS MANVILLE INT  
INC[JOHM]

PRIORITY-DATA: 1992DE-0007367 (May 30, 1992)

PATENT-FAMILY:

PUB-NO	PAGES	PUB-DATE	
LANGUAGE		MAIN-IPC	
EP 572891 A1		December 8, 1993	G
010	D04H 013/00		
JP 3260482 B2		February 25, 2002	N/A
007	D04H 003/10		
NO 9301976 A		December 1, 1993	N/A
000	D04H 003/10		
CA 2097264 A		December 1, 1993	N/A
000	D04H 003/16		
FI 9302428 A		December 1, 1993	N/A
000	D04H 003/02		
JP 06073655 A		March 15, 1994	N/A
007	D04H 003/10		
ZA 9303747 A		February 23, 1994	N/A
019	D04H 000/00		
EP 572891 B1		April 9, 1997	G
009	D04H 013/00		
DE 59306083 G		May 15, 1997	N/A
000	D04H 013/00		
ES 2102550 T3		August 1, 1997	N/A
000	D04H 013/00		
US 6235657 B1		May 22, 2001	N/A

000

D04H 013/00

DESIGNATED-STATES: AT BE CH DE DK ES FR GB GR IE IT LI LU  
 NL PT SE AT BE CH DE  
 DK ES FR GB IE IT LI NL PT SE

CITED-DOCUMENTS: EP 176847; EP 242524 ; EP 315553 ; EP  
 413295 ; EP 432620 ; GB  
 2226054 ; EP 347795

## APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-DESCRIPTOR	APPL-NO
EP 572891A1	N/A		
1993EP-0108354	May 24, 1993		
JP 3260482B2	N/A		
1993JP-0128967	May 31, 1993		
JP 3260482B2	Previous Publ.		JP 6073655
	N/A		
NO 9301976A	N/A		
1993NO-0001976	May 28, 1993		
CA 2097264A	N/A		
1993CA-2097264	May 28, 1993		
FI 9302428A	N/A		
1993FI-0002428	May 27, 1993		
JP 06073655A	N/A		
1993JP-0128967	May 31, 1993		
ZA 9303747A	N/A		
1993ZA-0003747	May 28, 1993		
EP 572891B1	N/A		
1993EP-0108354	May 24, 1993		
DE 59306083G	N/A		
1993DE-0506083	May 24, 1993		
DE 59306083G	N/A		
1993EP-0108354	May 24, 1993		
DE 59306083G	Based on		EP 572891
	N/A		
ES 2102550T3	N/A		
1993EP-0108354	May 24, 1993		
ES 2102550T3	Based on		EP 572891
	N/A		
US 6235657B1	N/A		
1993US-0070564	June 1, 1993		

INT-CL (IPC): B32B005/06, B32B005/08 , B32B005/26 ,  
 B32B007/04 ,  
 B32B011/02 , D01F006/86 , D04H000/00 , D04H001/46 ,

D04H001/58 ,  
D04H003/00 , D04H003/02 , D04H003/04 , D04H003/10 ,  
D04H003/16 ,  
D04H005/02 , D04H013/00 , D06N005/00 , D06N007/00 ,  
E04B001/66 ,  
E04D003/35

ABSTRACTED-PUB-NO: EP 572891A

**BASIC-ABSTRACT:**

Laminated fabric (I) comprises at least two layers of spun-bonded material (A) and at least one layer of mesh made of reinforcing fibres (B). Layer(s) (B), contg. 0.5-3 threads/cm, are each laid between two layers of (A), and (A) and (B) are needled together with 20-70 stitches/cm<sup>2</sup>.

Also claimed is the prodn. of (I), by spinning a first layer of (A), applying fabric layer (B), spinning the second layer of (A) onto this and needling the combination together with 20-70 stitches/cm<sup>2</sup>.

Pref. material (A) consists of polyester fibres, esp. polyethylene terephthalate (PET), and the reinforcing fibres (B) are made of glass or other thermally stable materials. (I) is also bonded with a chemical binder, pref. a fire-retardant binder (II).

USE/ADVANTAGE - For the prodn. of roofing strips and roof sub-tensioning strips (claimed). Provides a low-cost material for the above application, which retains its dimensional stability (no corrugation or cracking) even under high thermomechanical load (contrast prior-art laminates); when bituminised, a 1000-mm wide strip of (I) only contracts by 2-4mm (cf. 12 mm for conventional strip); the bituminised prods. are stable and free from bubbles, with high impact penetration resistance.

ABSTRACTED-PUB-NO: EP 572891B

EQUIVALENT-ABSTRACTS:

A laminate formed from at least two layers of spunbonded web and at least one laid layer of reinforcing yarn, wherein the laid layer or layers are each disposed between two layers of spunbonded and have a thread count of 0.5 to 3 threads/cm, and the spunbonded and laid layers are joined together by needling at 20-70 stitches/cm<sup>2</sup>.

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Also claimed is the prodn. of (I), by spinning a first layer of (A), applying fabric layer (B), spinning the second layer of (A) onto this and needling the combination together with 20-70 stitches/cm<sup>2</sup>.

Pref. material (A) consists of polyester fibres, esp. polyethylene terephthalate (PET), and the reinforcing fibres (B) are made of glass or other thermally stable materials. (I) is also bonded with a chemical binder, pref. a fire-retardant binder (II).

USE/ADVANTAGE - For the prodn. of roofing strips and roof sub-tensioning strips (claimed). Provides a low-cost material for the above application, which retains its dimensional stability (no corrugation or cracking) even under high thermomechanical load (contrast prior-art laminates); when bituminised, a 1000-mm wide strip of (I) only contracts by 2-4mm (cf. 12 mm for conventional

strip); the bituminised prods. are stable and free from bubbles, with high impact penetration resistance.

CHOSEN-DRAWING: Dwg.0/4 Dwg.4/4

TITLE-TERMS: DIMENSION STABILISED LAMINATE BITUMEN ROOF STRIP PRODUCE

REINFORCED LAYER GLASS FIBRE MESH LAYER SPIN  
BOND PET FIBRE FIX  
NEEDLE

DERWENT-CLASS: A23 A93 L02 P73 Q43 Q45

CPI-CODES: A11-B09A1; A11-B15; A12-R05; A12-S05E; L02-D10; L02-D14Q;

UNLINKED-DERWENT-REGISTRY-NUMBERS: 5214U

ENHANCED-POLYMER-INDEXING:

Polymer Index [1.1]

017 ; P0884 P0839 H0293 F41 ; S9999 S1183 S1161 S1070 ; P0839\*R

F41 ; A999 A782 ; A999 A419

Polymer Index [1.2]

017 ; D11 D10 F54 ; P0839\*R F41 ; H0011\*R

Polymer Index [1.3]

017 ; N9999 N6020 N6008 ; N9999 N6246 ; N9999 N5721\*R ; N9999 N7192

N7023 ; Q9999 Q7818\*R ; B9999 B4239 ; K9530 K9483 ; K9676\*R ; K9712

K9676

Polymer Index [2.1]

017 ; G3601\*R P0599 D01

Polymer Index [2.2]

017 ; K9892 ; ND01 ; B9999 B3758\*R B3747 ; Q9999 Q6860 Q6826 ; B9999

B4159 B4091 B3838 B3747 ; N9999 N5856 ; B9999 B3178 ; K9461

Polymer Index [2.3]

017 ; G2891 D00 Si 4A ; A999 A419 ; S9999 S1183 S1161 S1070 ; B9999

B4682 B4568 ; N9999 N6020 N6008 ; N9999 N5721\*R ; N9999 N6246

Polymer Index [3.1]

017 ; R00708 G0102 G0022 D01 D02 D12 D10 D19 D18 D31 D51 D53 D58

D88 ; R00806 G0828 G0817 D01 D02 D12 D10 D51 D54 D56

D58 D84 ; H0022  
H0011 ; P0328 ; P1741 ; P0351  
Polymer Index [3.2]  
017 ; P1707 P1694  
Polymer Index [3.3]  
017 ; ND01 ; B9999 B3758\*R B3747 ; Q9999 Q6860 Q6826 ;  
B9999 B4159  
B4091 B3838 B3747 ; N9999 N5856 ; B9999 B3178 ; K9461 ;  
Q9999 Q6644\*R  
; N9999 N5721\*R

POLYMER-MULTIPUNCH-CODES-AND-KEY-SERIALS:

Key Serials: 0004 0011 0147 0150 0153 0201 0205 0213 0231  
0306 1095 1288 1983  
2007 2212 2214 2215 2219 2220 2419 2486 2488 2600 2604 2617  
2669 2679 2682 2696  
2724 3159 3178 3241  
Multipunch Codes: 017 038 05- 143 144 166 171 228 308 309  
311 32& 431 441 446  
477 539 654 722 017 04- 08& 10- 15- 17& 17- 229 251 308 309  
32& 331 441 446 504  
54& 541 542 551 556 602 613 616 654 722 723 017 034 04- 055  
056 117 122 231 244  
245 27& 331 446 504 54& 541 542 551 556 602 609 613 616

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1993-172567